

Public Abstract

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Department:Educational & Counseling Psychology

Degree:PhD

Title:COLLEGIATE FOOTBALL STUDENT-ATHLETE BODY MASS COMPOSITION CHANGE RELATED TO MANDATORY BREAKFAST CONSUMPTION

Breakfast has existed in some form or fashion since the beginning of time. Numerous dietitians and nutritionists from all over the world consider breakfast to be the most important meal of the day (Clark 2008). This research study will primarily focus on the role of the introduction of a mandatory breakfast meal for the football student-athletes in the Sells Family Dining Hall facility at the University of Missouri. The purpose behind researching the effects of serving breakfast in athletic dining halls is to promote the health and wellness of all student-athletes through proper nutritional foundations. The Athletic Performance Department uses Dual-energy X-ray Absorptiometry (DXA) technology to analyze and record accurate measurements of bone mineral, fat, and lean soft tissue mass. ANOVA analysis will be employed to determine if there is a significant difference in the change in muscle mass percentage and body fat percentage from a year long period before breakfast was provided to the first full year that breakfast was provided and mandated for football student-athletes. All things associated with athletic training regiments, including timing of practices/workouts, and frequency of energy expenditure was held equal over the time period in this study. Introducing breakfast into the daily routine will ensure that football players will now consume more food each day, which may result in significant changes to body mass composition measurements. From a total population of 116 football student-athletes on the roster, results from a total of 34 football student-athletes. This sample size may appear small, but is sufficient to run statistical analysis tests in this study (Field 2009). In the social sciences, an effect size of 0.5,  $\alpha \pm$  level of 0.05, and a power analysis of 0.80 is widely accepted and achieved for this statistical review (yielded a power of 0.808). It was discovered that there was some change, but not enough to be significant, in body fat percentage among football student-athletes from pre-summer (May) 2009 to pre-summer (May) 2010 and post-summer (August) 2010 to pre-summer (May) 2011, and there was a significant decrease in lean muscle mass (mean=0.03134,  $t=4.389$ ,  $df=33$ ,  $p \text{ value}=.000$ ). The SPSS output reading suggests a significant 3% decrease in lean muscle mass pounds from the time period of pre-summer (May) 2009 to pre-summer (May) 2010 and post-summer (August) 2010 to pre-summer (May) 2011 for football student-athletes. Each student-athlete must work to become stronger, leaner, quicker, and faster to compete at an elite level. Proper nutrition is an integral part of developing into an elite athlete, both cognitively and physically (Hoffman et al., Jordan, Schafer, Tremblay, et al.). Moving forward in research, involving longer periods of time than two total years may show more significant effects of the proposed covariate(s). Each subsequent study will improve the knowledge base and add to the efforts to promote the health and wellness education and application to all student-athletes.

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